

### **REMARKS/ARGUMENTS**

This Amendment is filed in response to the non-final Official Action of March 21, 2006, the Official Action considering currently pending Claims 2-11, 13-22 and 24-30. Initially, Applicant appreciates the Examiner taking the time to discuss the non-final Official Action with Applicant's undersigned attorney. Applicant also appreciates the indication that Claims 7-8, 10-11, 18-19, 21-22, 26-27, and 29-30 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims and claim objections cited therein. However, non-final Official Action rejects Claims 3, 5, 6, 9, 25 and 28 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,493,409 to Lin et al., in view of U.S. Patent No. 6,327,311 to Ojard. The Official Action also rejects Claims 14, 16, 17, and 20 as being unpatentable over Ojard in view of Lin; rejects Claims 2, 4 and 24 as being unpatentable over Lin in view of Ojard, and further in view of U.S. Patent No. 4,700,360 to Visser; and rejects Claims 13 and 15 as being unpatentable over Ojard in view of Lin, and further in view of Visser. Further, the non-final Official Action objects to various ones of the claims for their recitations of "capable of," "is capable of," and "that is capable of," which the non-final Official Action asserts are not positive limitations.

In response to the objections to the claims, Applicant has amended dependent Claim 28 to remove the duplicative instances of the term "comprises," as identified by the Official Action. As to the use of "capable of" language, Applicant, although believing such language is perfectly acceptable, has amended various ones of the claims of the present application to remove the "capable of" language, and to instead recite that the respective elements are "configured for" performing the respective functions. In this regard, Applicant notes that it has been held that an apparatus (e.g., computer) configured (e.g., programmed) to perform various steps or functions creates a new apparatus. *See In re Alappat*, 33 F.3d 1526, 1545 (Fed. Cir. 1994); and *see id.* at 1569-1570 (Newman, concurring) ("Alappat's rasterizer is an electronic device for displaying a smooth waveform by selective illumination of pixels. The Alappat rasterizer operates by performing a sequence of steps in accordance with instructions that are generated electronically. ... The structure resides in the configuration by which the device operates, as [the majority] has explained, and is independent of how that configuration is provided.") (emphasis added).

Applicant therefore respectfully submits that the objection to the claims for including “capable of” language is overcome.

As explained during the telephone interview, in response to the rejection of the claims as being unpatentable under 35 U.S.C. § 103(a), Applicant has amended independent Claim 5 based upon concepts presented by allowable dependent Claims 7 and 10. Similarly, Applicant has amended independent Claims 16 and 25 based upon concepts presented by allowable dependent Claims 18 and 21, and Claims 26 and 29, respectively, and have also accordingly amended allowable Claims 26 and 29 in view of the amendment to Claim 25. More particularly, Applicant has amended independent Claim 5 (and similarly independent Claims 16 and 25) to further recite that the number of delay elements of the tapped-delay line filter(s) is based on the number of bits  $n$ , the transmission rate  $t$  and the carrier frequency  $f_c$ . Allowable dependent Claim 7 (and similarly dependent Claims 18 and 26), then, more particularly recites that the number of delay elements,  $m_m$ , of the tapped-delay line filter(s) for receiving the integrated in-phase portion of the QAM signal(s) equals  $(f_c/t) \times 2 \times n$ . And allowable dependent Claim 10 (and similarly dependent Claims 21 and 29) more particularly recites that the number of delay elements  $m_q$  of the tapped-delay line filter(s) for receiving the integrated quadrature-phase portion of the QAM signal(s) equals  $(f_c/t) \times 2 \times n + 1$ .

In contrast to amended independent Claims 5, 16 and 25, and for reasons similar to those supporting the allowability of dependent Claims 7, 10, 18, 21, 26 and 29, Applicant respectfully submits that none of Lin, Ojard and Visser, taken individually or in combination, teach or suggest a system or method as recited, including a tapped-delay line filter with a number of delay elements based on a number of bits  $n$ , a transmission rate  $t$  and a carrier frequency  $f_c$ . Applicant therefore respectfully submits that amended independent Claims 5, 16 and 25, and by dependency Claims 2-4, 6-11, 13-15, 17-22, 24 and 26-30, are patentably distinct from Lin, Ojard and Visser, taken individually or in combination. And for at least the foregoing reasons, Applicant respectfully submits that the rejections of Claims 3, 5, 6, 9, 25 and 28 under 35 U.S.C. § 103(a) are overcome.

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**CONCLUSION**

In view of the amended claims and the remarks presented above, Applicant respectfully submits that all of the claims of the present application are in condition for allowance. It is respectfully requested that a Notice of Allowance be issued in due course. The Examiner is encouraged to contact Applicant's undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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